

SOME BIOLOGICAL ASPECTS OF THE GIANT ISOPOD, *BATHYNOMUS GIGANTEUS* (A. MILNE-EDWARDS) (ISOPODA: CIROLANIDAE), OFF THE YUCATAN PENINSULA

Specimens of the giant isopod, *Bathynomus giganteus* (A. Milne-Edwards), were collected on the continental slope off the Yucatan Peninsula, Mexico, in October 1985 (74 isopods), February 1986 (70), August 1986 (64), August 1989 (163) and February 1990 (1280). The isopods were collected with traps baited with skipjack tuna and large carangids. Depth of collection ranged from 350 to 730 m. In the deepest station, only manca and juveniles were obtained. Size distribution ranged from 4.4 cm to 36.5 cm total length. A 36.5 cm male is the largest specimen of this species so far recorded. Male:female ratio varied in each collecting date, from 0.8:1 to 1.7:1. Mature males and females were obtained in every collecting date. Length-weight and length-width relationships were obtained. Specimens collected in August 1989 and February 1990 were studied in more detail. In August, 35% of the males had appendices masculinae, and 14% of the females showed fully developed oostegites. In February, these percentages were 50 and 45, respectively. Both the smallest mature male and female measured 21 cm. No ovigerous females were caught in any cruise. An ovarian development scale was designed, ranging from stage 1 (quiescent ovaries) to stage 5 (spent ovaries with oocytes in resorption). In August, a large percentage of females showed ovaries in intermediate stages 2 and 3, while in February, the ovaries of most of the females were in stages 1 and 4. These results suggest a differential distribution of life stages on the bottom.

An exponential relationship between body length (BL) and body weight (BW) was found ($\text{Log. BW} = -1.43(\text{BL}) + 2.96$; $n = 515$, $r = 0.998$). Although males with appendices masculinae and females with developed oostegites were found from every collecting date, the analysis of ovarian development indicates that in August most females are preparing for reproduction, while in February most of this reproduction has taken place. The large number of mancas (554) collected in February also support this idea.

In gut content analysis, the following groups were identified: fish, cephalopods, decapods, isopods, sponges, echinoderms, nematodes and tunicates. No differences were found in the diet composition between sexes. *B. giganteus* is reported as a scavenger, but these results show that it also feeds on some sessile organisms on the bottom. A large female was found in the stomach of a tiger shark, *Galeocerdo cuvierii*.

In regard to epizoans, the cirriped *Octolasmis aymonini geryonophyla* was found in a large percentage of isopods from every cruise. In February 1990, the gastropod *Mitrella rushii* was found in large quantities inside the oostegites of a number of females, but also on the coxal plates and pleopods of some males. This is the first record of this association, but their relationship is not clear. Epizoans were more abundant on females than on males which suggests that they have a lower moult rate than males.

P. Briones-Fourzán and E. Lozano, Instituto Ciencias del Mar y Limnología, Estación 'Puerto Morelos', Universidad Nacional Autónoma de México. Ap. Postal 1152, Cancún, Q.R., 77500 México.